

A RARE CASE OF HYDROCEPHALIC MONSTER IN NON DESCRIPTIVE GOAT

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Abstract: A non-descript goat was presented with a history of labour since 12 hours. Forelegs of fetus were hanging through vaginal passage. Absence of any foetal reflex was indicative of dead fetus. After unsuccessful attempts to relieve dystocia by traction, repulsion finally performed cesarean section. The delivered fetus through cesarean section had an enlarged head with abnormal fluid accumulation confirming hydrocephalus. Follow up of case revealed uneventful recovery.

Keywords: Goat; hydrocephalus; cesarean section, Monster.

Introduction

Internal hydrocephalus is due to excessive fluid in the ventricular system and external hydrocephalus is rare and due to excessive fluid between brain and dura matter (Roberts, 1982). The condition of foetal monsters/abnormalities is more common in cattle (Yadav, 2008 and Sharma, 2015) but it is uncommon in ewes and does not exceed 3% (Jackson, 2004). Occurrence of dystocia may be either due to maternal or foetal causes (Kinne, 2001 and Thedford 2008). This report is an attempt to provide information on a case of dystocia due to foetal hydrocephalus in a non-descript goat (Fig.1).

Hydrocephalus condition is an excessive accumulation of cerebrospinal fluid (CSF) under pressure and sometimes under no pressure resulting from impaired circulation and absorption of CSF or in some circumstances, from increased production of CSF by a choroid plexus papilloma. Hydrocephalus is an excessive cerebrospinal fluid accumulation in the cranial cavity. Hydrocephalus refers to the enlargement of the cranium due to abnormal accumulation of the fluid in ventricles or cavities of brain (Noakes *et al.*, 2001). Several pathologies are encountered in the goat's embryo and foetus that they occur due to infectious and non-infectious reasons at pre-implantation, embryonic and foetal periods.

Hydrocephalus may be of two (2) types; one may be communicating where there is no obstruction within the ventricular system of the brain (hollow space within the brain) and

other may be non communicating (obstructive) where there is an obstruction of the ventricular system within the confinements of the brain. Hydrocephalus is commonly seen in pigs, calves and puppies but rarely in sheep and goat (Noakes *et al.*, 2001). Per-vaginal delivery in cases of foetal hydrocephaly is difficult except in few cases by giving stab incision on football shaped foetal mass and draining out the fluid to compress the head (Upasana *et al.*, 2012).

Case history and Observation

A female goat was presented to Veterinary Dispensary, with complete absence of labour and forelegs of fetus hanging through vaginal passage. As per the history given by owner, one male fetus was delivered normally but another foetus was not. On clinical examination, goat had rectal temp. 104.6^of, pulse rate was 115/min and respiratory rate was 68/min. Per-vaginal examination revealed that head was too big to pass through vaginal passage. Absence of any foetal reflex was indicative of dead fetus. After unsuccessful attempts to relieve dystocia by traction, repulsion and unable to stab the hydrocephalic head finally performed cesarean section.

Treatment and Discussion

The goat was restrained on right lateral recumbency while the left abdominal area was shaved, scrubbed and cleaned with application of surgical spirit. The site was anesthetized by 2% lignocaine hydrochloride as local anesthesia. Cesarean section was performed by paramedian approach. Following skin and muscle incision, uterus was exteriorized and incised. A dead monster female fetus (Fig.2) with enlarged head was removed. The uterus was flushed with normal saline and sutured with double inversion sutures. Abdominal incision was closed in a routine manner. Postoperative care involved intravenous administration of 5% DNS (500ml), I/V, a course of antibiotics Inj. Ceftriaxone 300mg I/M for 5 days, Inj. Meloxicam 5mg/ml I/M at the rate of 0.5mg/kg body weight to reduce pain, Inj. B-complex 2.5ml I/M. The postoperative antibiotic and supportive therapy was continued for next four days and the goat showed an uneventful recovery (Divya & Chaithanya, 2016).

Congenital anomalies may be etiologic in producing hydrocephalus. Anomalies of ventricular flow system would produce hydrocephalus directly. The most common abnormality of ventricular flow is atresia of the aqueduct of Sylvius. This abnormality blocks the fluid flow system between the third and fourth ventricles causing dilatation of the lateral ventricles and the third ventricle. The fetus may be born with complete atresia of the aqueduct of Sylvius or may develop full occlusion of the aqueduct over the first few days or weeks of life.

Obstruction in free passage of cerebrospinal fluid in to the arachnoid space leads to excessive swelling of cranial cavity during foetal development (Salunke *et al.*, 2001).

There is also a genetic sex - linked recessive form of hydrocephalus secondary to atresia of the aqueduct of sylvius. Congenital hydrocephalus in domestic animals is due to autosomal recessive genes (Roberts, 1982). Another anomaly that will produce a non-communicating hydrocephalus is atresia of the foramen of Luschka and Magendie and death results due to increased pressure on vital centre of brain. Hydrocephalus in small ruminants is inherited through autosomal genes, although the role of its origin may be played by viral infections of fetus and dietary factors of dam. Though exact cause of hydrocephalus in the present case was not clear, reports have indicated that alterations in genetic factors, infectious agents and environmental factors cause hydrocephalus (Kalman, 1989).

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Photographs:



Fig.1: Head of Hydrocephalic Monster foetus



Fig.2: Hydrocephalic Monster foetus of Goat